

AMSTERDAM INNOVATION ARENA

EUROPE'S URBAN
ENERGY-MOBILITY
TRANSITION

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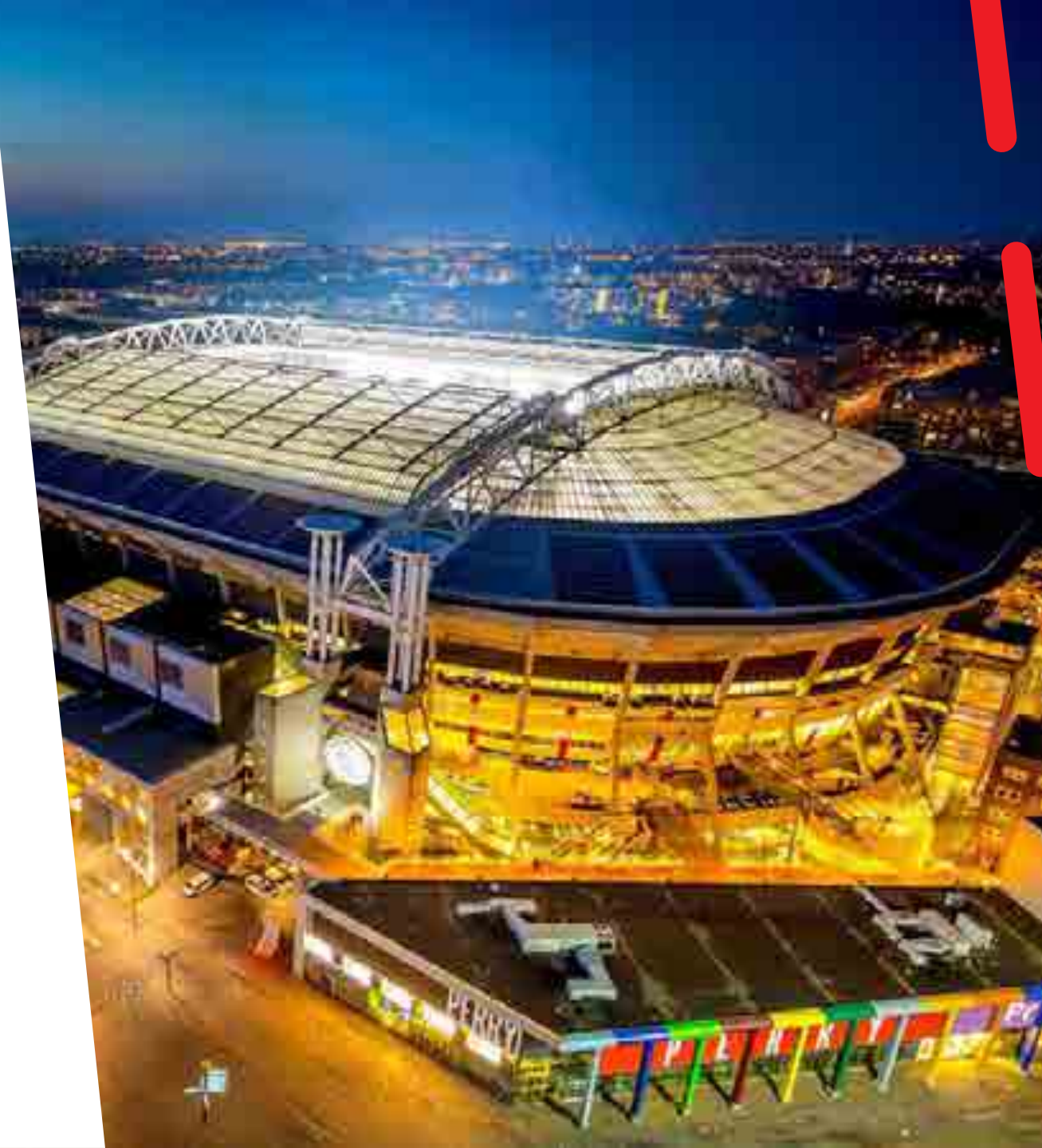
AMSTERDAM ENERGY ARENA

INCUBATOR OF A NEW ENERGY

SHAREHOLDERS:



PROJECT PARTNERS:



Bouw van opslagbatterij (3 megawatt) in Johan Cruijff ArenA van start



In de Johan Cruijff ArenA is men gestart met de bouw van een opslagbatterij van 3 megawatt, bestaande uit honderden gebruikte Nissan Leaf-accu's. De energieopslagfaciliteit zorgt ervoor dat het voetbalstadion duurzaam opgewekte energie efficiënter kan gebruiken. Daarnaast zal ArenA de opgewekte energie gaan verhandelen aan partijen in de regio.



A own Amsterdam Arena - Energy Storage System, relevant and much needed

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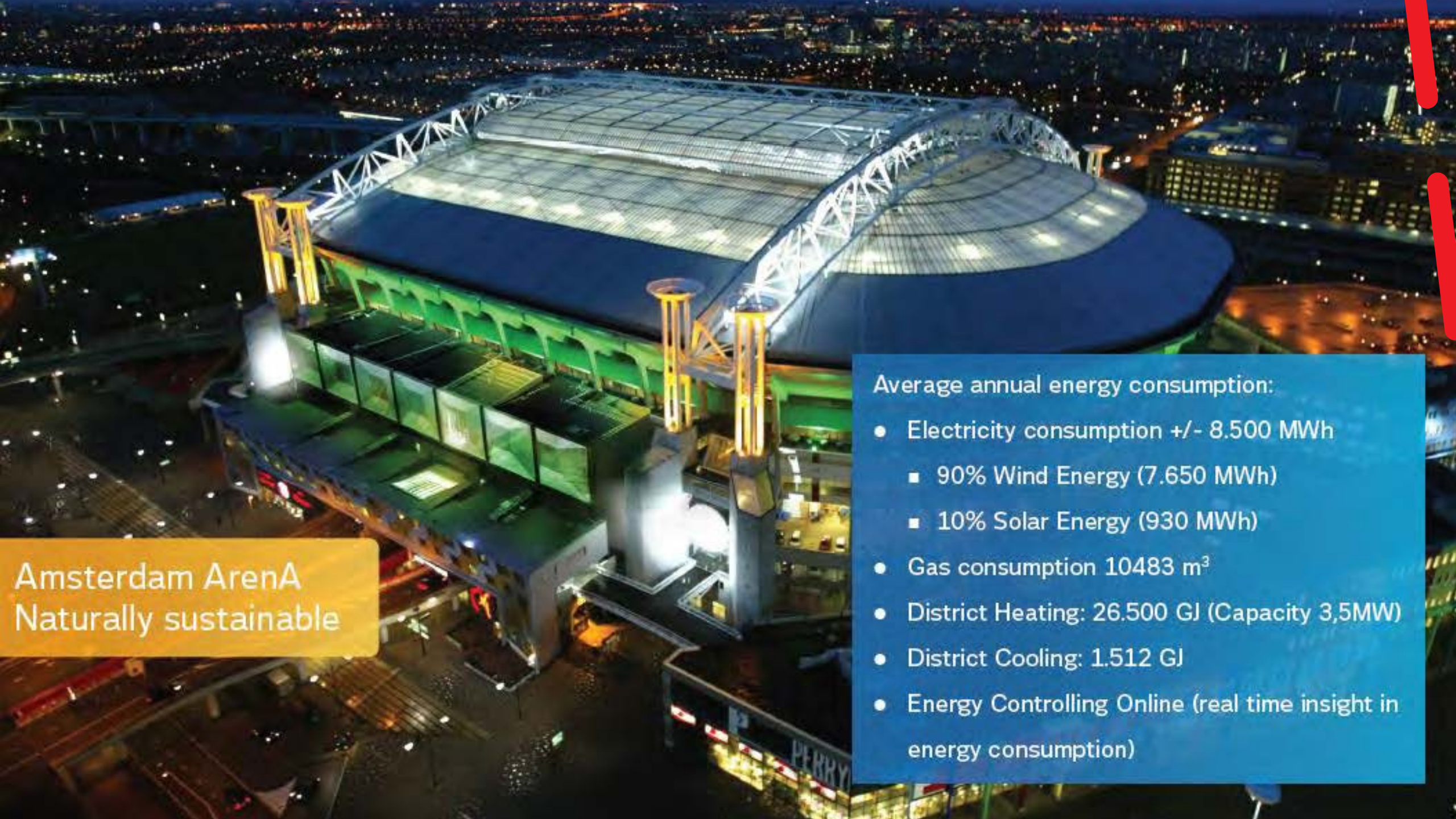
Grote stroomstoring Schiphol verholpen, vliegverkeer nog gehinderd

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Als gevolg van een grote stroomstoring die zich voordeed in de nacht van zaterdag op zondag, is de luchthaven Schiphol enkele uren gesloten geweest. Rond 6.30 uur ging de luchthaven weer open en werden passagiers weer toegelaten. Wel hebben passagiers en het vliegverkeer nog last van de eerdere stroomstoring.





Amsterdam Arena
Naturally sustainable

Average annual energy consumption:

- Electricity consumption +/- 8.500 MWh
 - 90% Wind Energy (7.650 MWh)
 - 10% Solar Energy (930 MWh)
- Gas consumption 10483 m³
- District Heating: 26.500 GJ (Capacity 3,5MW)
- District Cooling: 1.512 GJ
- Energy Controlling Online (real time insight in energy consumption)

PROJECTS

ENERGY STORAGE SYSTEM

V2G

FUTURE DEVELOPMENTS

Hub of the future

Energy grid South East

Open and shared energy system

More livable city by data



AMSTERDAM ENERGY ARENA



CONSUMPTION ARENA

Meterdata Arena: Concerts and soccer games consume power to >3MW against normal usage 0,7 – 1,5MW



- Graph shows power drawn from the grid. It is therefore net power usage, including solar production



ENERGY STORAGE SYSTEM



PROJECT PURPOSE

PROJECT DRIVERS

- Efficiency
- Sustainability
- Reliability

REVENUE DRIVERS / SERVICES

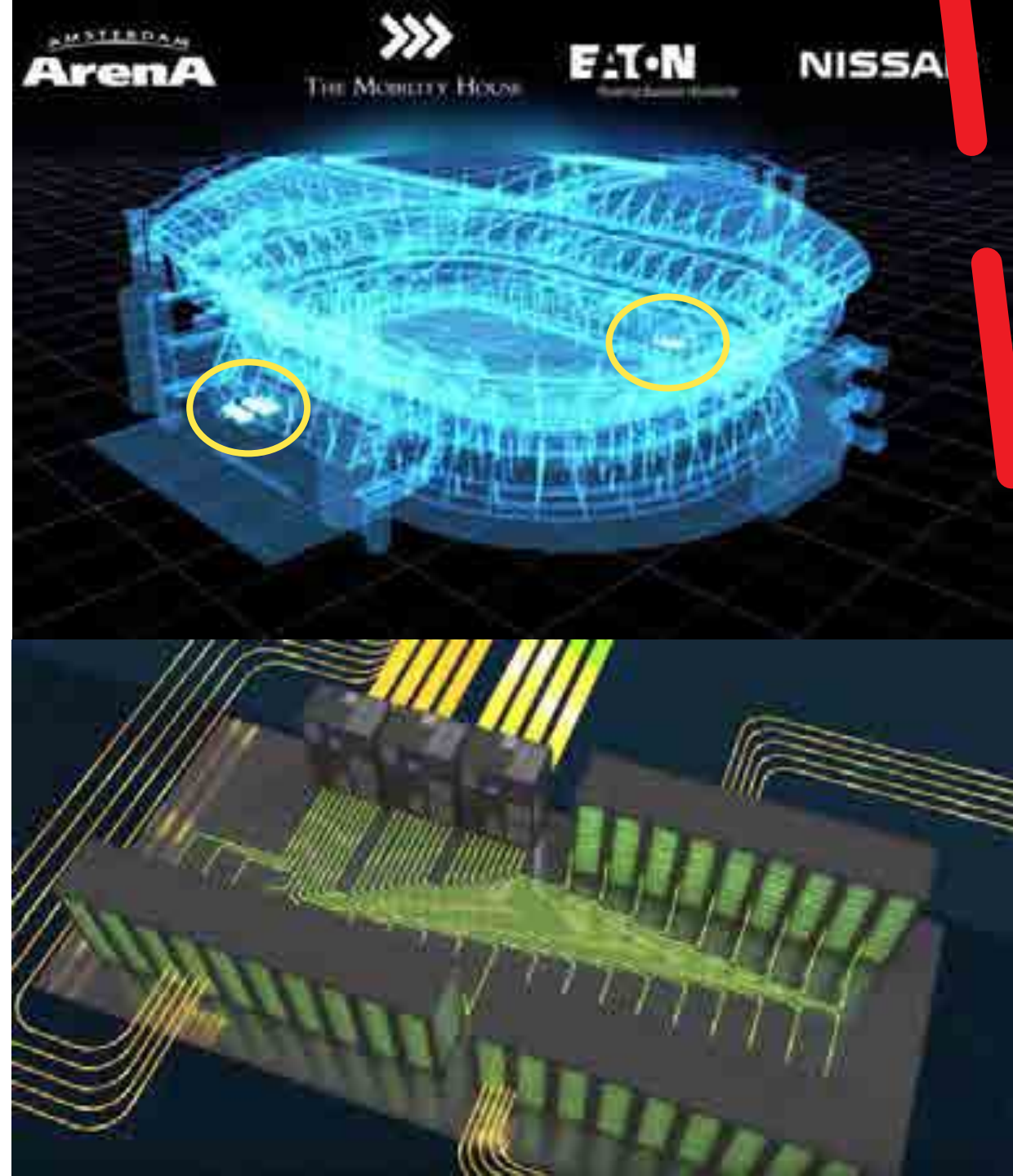
- Backup
- Peak Shaving
- Grid Stabilisation Services

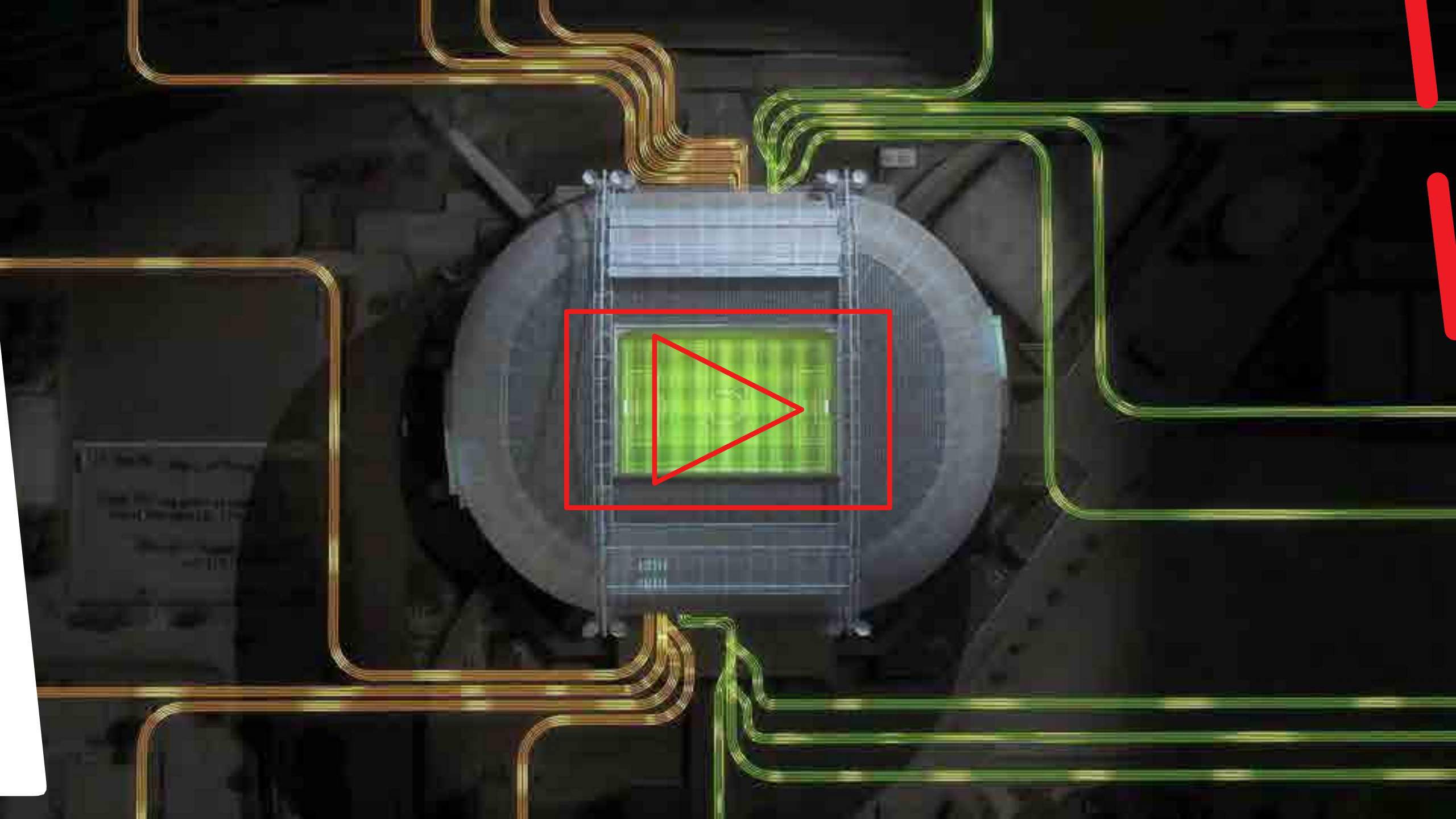


PROJECT DETAILS

ENERGY STORAGE SOLUTION

- 4MW / 4MWh
- 9 Bidirectional Invertors
- 119 Battery Racks
- 1160 Battery Packs
- 12 Nissan Battery modules in a Pack





V2G & PEOPLE MOVER



V2G & PEOPLE MOVER



PHASE 1

- 5-10 Bidirectional Chargers
- 5-10 Leafs / People Movers for V2G & Car Sharing



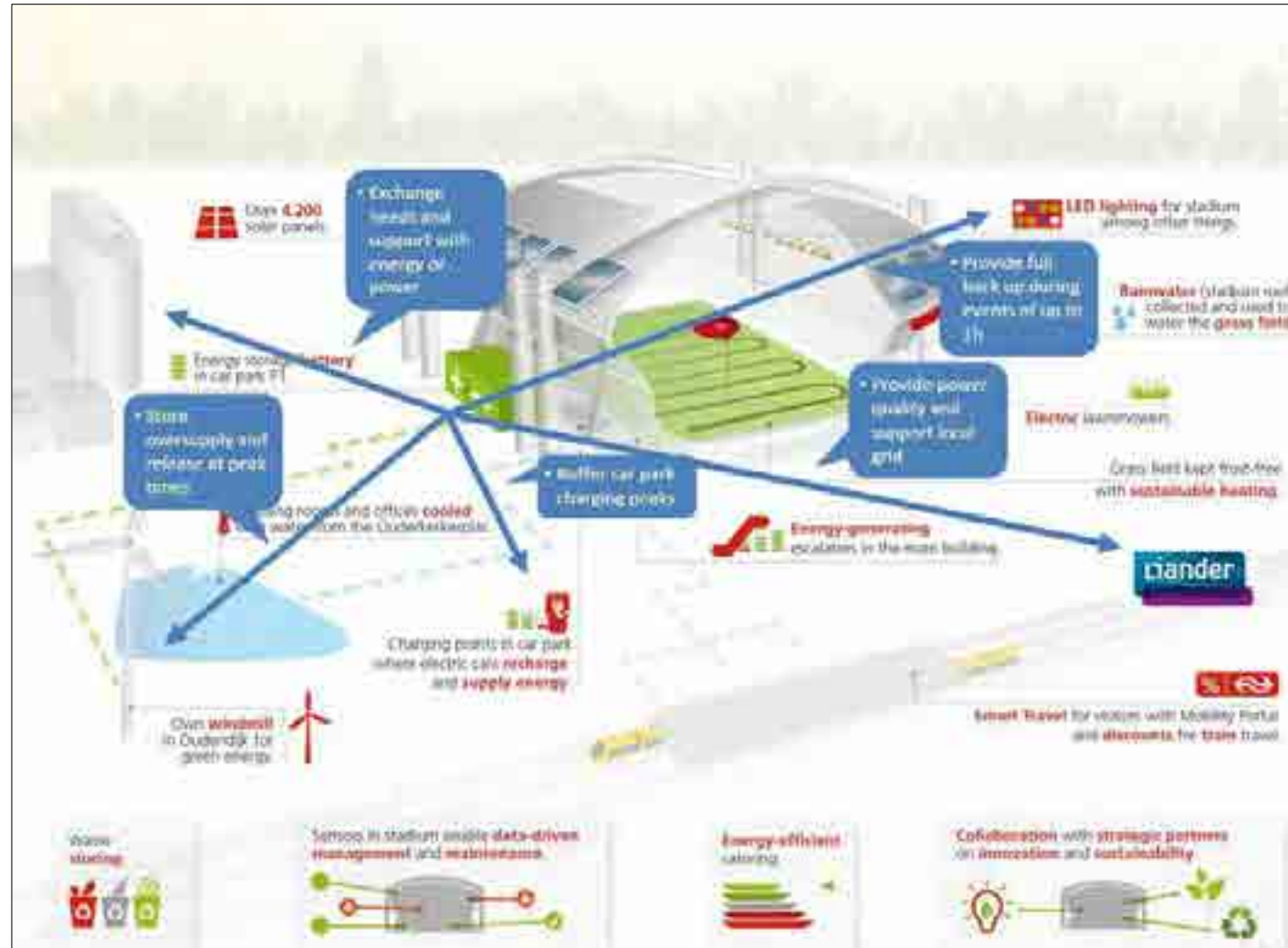
PHASE 2

- Launch Mobility as a service Concept such as a (V)VIP Shuttle Service
- And more!

HUB OF THE FUTURE



CONNECTING THE SOUTH EAST AREA



MORE LIVABLE CITY BY GENERATED DATA

Data set possibilities

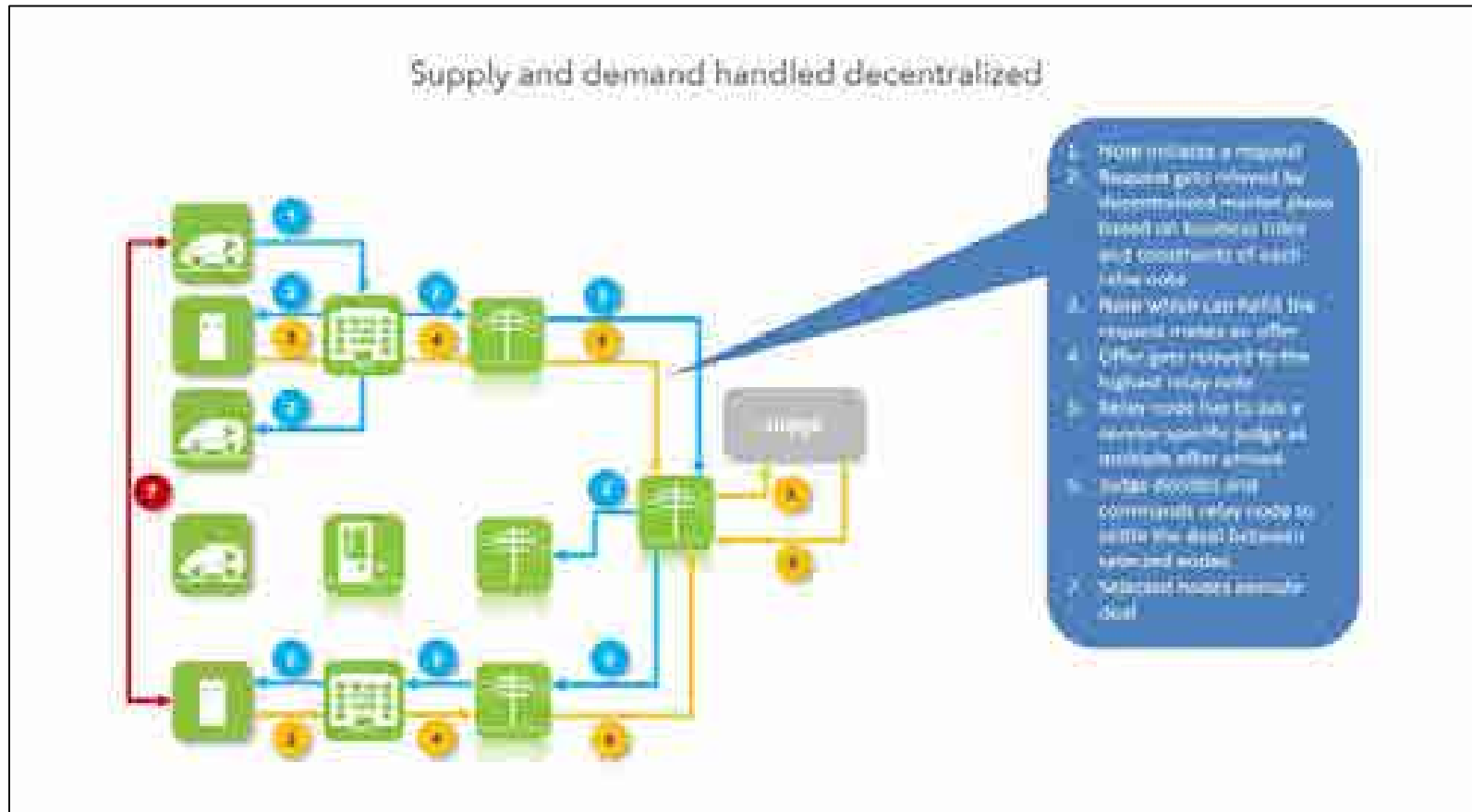
Data set available

- Energy and power data on consumer level
- PV energy production
- Storage data
- Power quality
- Frequency
- Vehicle charging data
- V2G information

Data usage examples

- Increase usage of renewable energy
- Reduce grid load and peaks
- Develop energy sharing models
- Validate intelligent vehicle integration

MORE EFFICIENT AND SUSTAINABLE ENERGY SYSTEM



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